Concept applications in project

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1 Concepts and their applications

1.1 Basic inspector

Line 1036, Unit `getState()`

Line 2074, Unit `getStrength()`

Line 2085, Unit `getAgility()`

Line 2165, Unit `getOrientation()`

1.2 Class invariant

Line 22, Unit Unit class

1.3 Defensive programming

Line 76, Unit try/catch

Line 405, Unit throws

Line 1846, Unit throws

1.4 Nominal programming

Line 765, Unit `setCurrentStaminaPoints()`

1.5 Total programming

Line 562, Unit `setWeight()`

Line 601, Unit `setAgility()`

(all attributes)

1.6 Uni-directional association

Line 272, Unit `material`

1.7 Bidirectional association

1.7.1 World-Cube

Line 72, Cube `world`

Line 76, World `cubes`

1.7.2 World-Unit

Line 242, Unit `world`

Line 81, World `unit`

1.8 Destructor

Line 2698, Unit `die()`

1.9 Generic class instantiation

Line 81, World `units`

Line 86, World `factions`

Line 91, World `boulders`

Line 96, World `logs`

1.10 Test method

`tests` package

1.11 Polymorphism

Terrain hierarchy

Material hierarchy

1.12 RunTime Type Information

Line 276, Cube `isSolid()`

Line 231, Cube `spawnBoulderOrLog()`

1.13 Dynamic binding

Line 1622, Unit `setMaterial(Log)`

1.14 Liskov Substitution Principle

LSP is applied everywhere (all trivial cases).

1.15 Enumeration

`State`

`WorkActivity`

1.16 Value class

`Position` class

1.17 Interface/abstract class

`Material`

`Expression`

`Statement`

`Terrain`

1.18 Anonymous class

line 1889, Unit `new Comparator<QueueElement>`

1.19 Generic class definition

`Expression`

1.20 Lambda expression

Line 24, PositionExpressionNextTo `filter`

Line 457, World `advanceTime`

1.21 Stream

Line 23-26, PositionExpressionNextTo `cubeOptional`

Line 457, World `advanceTime`